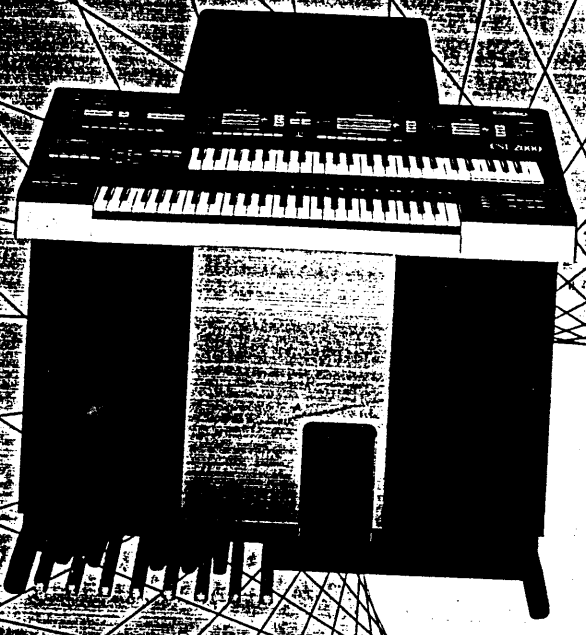
MASTER

COSMOTONE

CST-2000



OPERATION MANUAL 1

MANUAL DE OPERACION 43

使用說明書 85

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CASIO

INTRODUCTION

Thank you and congratulations on your selection of the Casio CST-2000 Electronic Organ. Your new Casio keyboard offers advanced features and functions such as a PD sound source which provides 24 ultra-realistic instrument timbres, in addition to 16 UPPER TONE timbres, 12 LOWER TONE timbres and 3 PEDAL TONE timbres. Rhythm sounds are also true-to-life, thanks to a PCM Rhythm source. Other unique functions include SUPER DRUMS, a 4-Track sequencer, and Tone and Rhythm Registration. To ensure optimum performance and long-term reliability, please read this manual carefully before use of your new Casio keyboard.

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MAIN FEATURES OF THE CASIO CST-2000

■ PD Sound Source & PCM Rhythm Source

Tone and Rhythm timbres are clear and realistic thanks to a built-in PD sound source and a PCM Rhythm source. CST-2000 features a total of 55 Tone timbres, and 16 different Rhythm patterns. A unique SUPER DRUMS function allows selection of 4 different pattern variations for percussion instrument timbres and accompaniment patterns within the Rhythm Patterns.

■ Tone Mixing

The CST-2000 features two separate 49-key keyboards — the UPPER TONE keyboard and the LOWER TONE keyboard. PD sounds can be assigned to both the UPPER and LOWER keyboards, and can be mixed with UPPER TONE and LOWER TONE timbres for unique original sounds.

■ Tone and Rhythm Registration

Up to 8 different Tone settings, as well as 8 Rhythm settings can be held in the CST-2000 memory for instant recall, via Tone Registration and Rhythm Registration. Tone Registration programs include not only selected UPPER TONE, LOWER TONE and PEDAL TONE timbres, but Tone Mixing settings, as well as effect settings. Rhythm Registration programs include basic Rhythm Pattern selection, SUPER DRUMS settings, as well as Tempo specification.

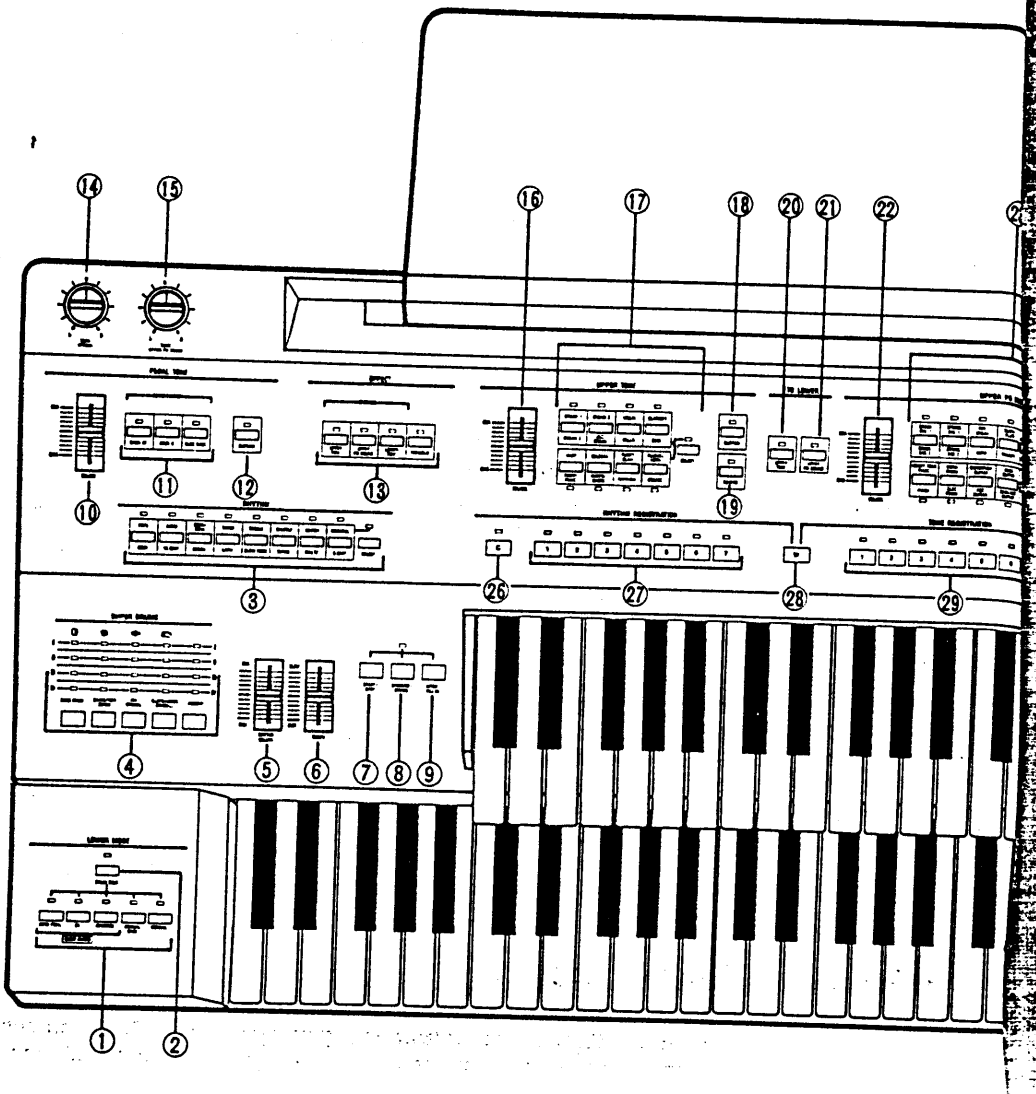
■ 4-Track Real-time Sequencer

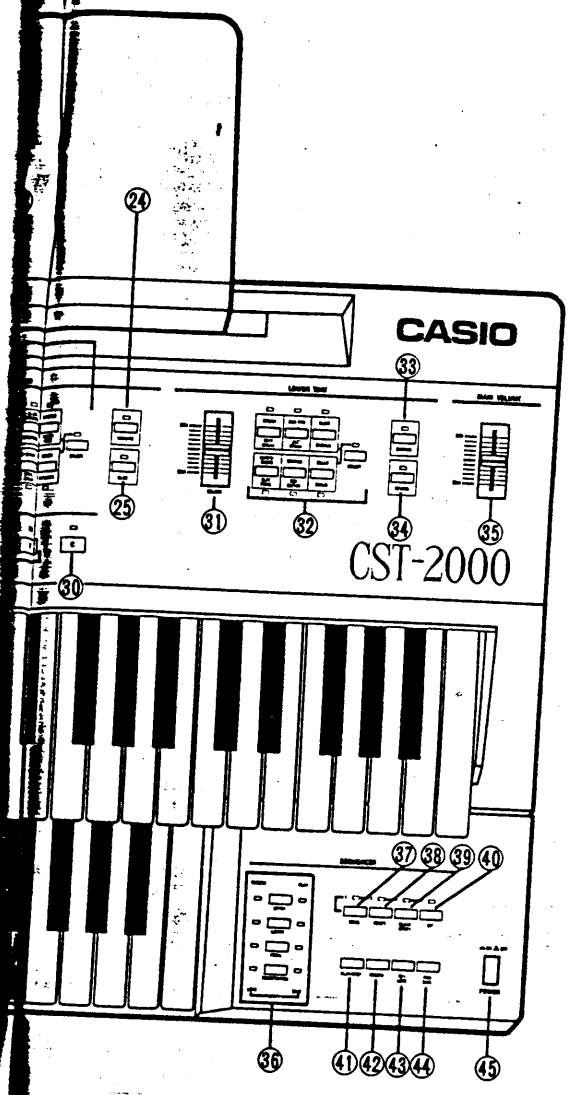
Program up to 4 complete songs via a built-in 4-Track Sequencer. Separate tracks are assigned to UPPER, LOWER, and PEDAL Tracks, as well as a REGISTRATION Track which holds timbre registration data as well as Rhythm selection, Lower Mode ON/OFF, and timing data.
Each song may contain approximately 1100 notes, and tracks can be recorded and played back entirely independently, for easy editing and "minus-one" practice play.

■ Program Save Function

Sequencer programs and Tone & Rhythm Registration programs can be saved on cassette tape for later editing or performance. Create an entire library of unique arrangements and keyboard setting registrations. Connection of tape recorder via MT DIN connector allows data SAVE/LOAD and VERIFY operations.

GENERAL GUIDE





LOWER MODE Section

① Accomp Mode selectors
② Drum Solo key

RHYTHM Section

③ Rhythm selectors
④ SUPER DRUMS control panel
⑤ Rhythm volume slider
⑥ Tempo slider
⑦ START/STOP key
⑧ SYNCHRO/ENDING key
⑨ INTRO/FILL-IN key

PEDAL TONE Section

⑩ PEDAL TONE volume slider
⑪ PEDAL TONE selectors
⑫ PEDAL TONE Sustain key

⑬ EFFECT control panel
⑭ Tuning control
⑮ Tuning control (PD Sound)

UPPER TONE Section

⑯ UPPER TONE volume slider
⑰ UPPER TONE selectors
⑱ UPPER TONE Sustain key
⑲ UPPER TONE Reverb key

TO LOWER Section

⑳ UPPER TONE Assign key
㉑ UPPER PD Sound Assign key

UPPER PD SOUND Section

㉒ PD Sound volume slider
㉓ PD Sound selectors
㉔ PD Sound Vibrato key
㉕ PD Sound Glide key

REGISTRATION Section

㉖ Rhythm Registration Cancel key
㉗ Rhythm Registration selectors
㉘ Registration Write key
㉙ Tone Registration selectors
㉚ Tone Registration Cancel key

LOWER TONE Section

㉛ LOWER TONE volume slider
㉜ LOWER TONE selectors
㉝ LOWER TONE Sustain key
㉞ LOWER TONE Reverb key

㉟ Main volume slider

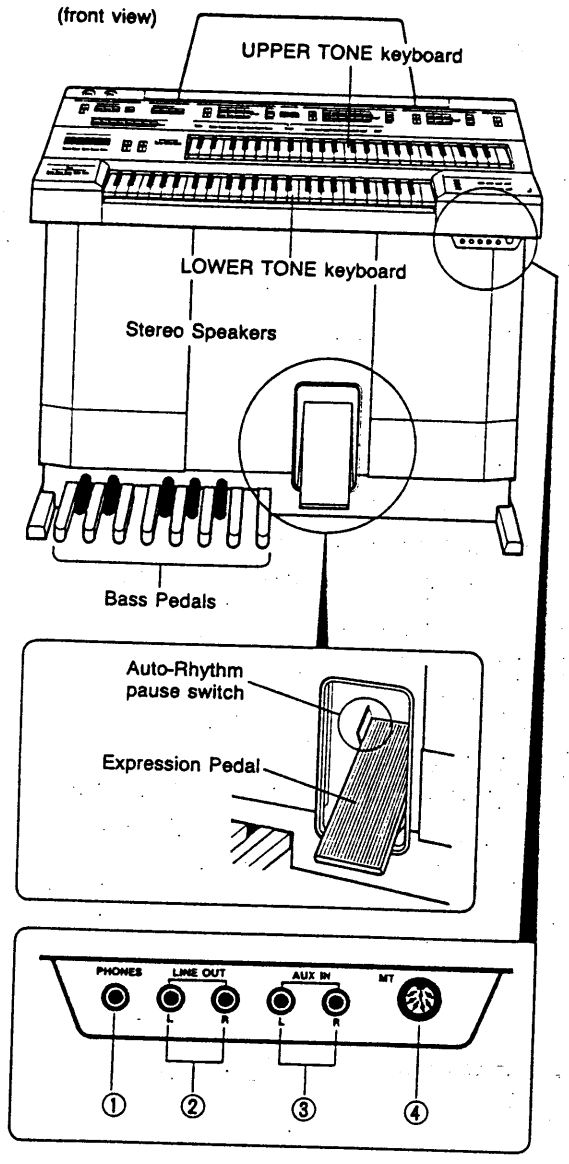
SEQUENCER Section

㊱ Track selectors
㊲ Song selector
㊳ Reset key
㊴ Clear/Verify key
㊵ MT selector
㊶ PLAY/STOP key
㊷ RECORD key
㊸ REVERSE/LOAD key
㊹ FORWARD/SAVE key

㊺ Power button

TERMINALS

① Headphone jack
② LINE OUT jacks
③ AUX IN jacks
④ MT terminal

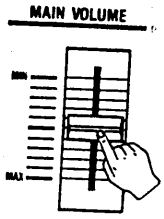


*Make connections to the LINE OUT jacks only with the power of the keyboard switched OFF and the volume of the external device set to MIN.

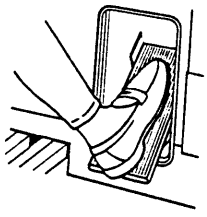
PART 1: BASIC OPERATION

① Plug in CST-2000 and turn power button ON.

② Move MAIN VOLUME slider to a position between MIN and MAX.
Note that the slider moves DOWN to the MAX position.

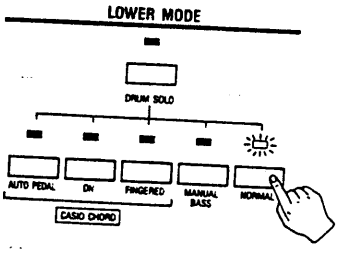


③ Depress the EXPRESSION PEDAL.



④ Press any of the selectors to select a timbre for the UPPER TONE keyboard and the LOWER TONE keyboard, as well as the BASS PEDALS.

NOTE: Confirm that NORMAL is selected. Press NORMAL key if it is not.



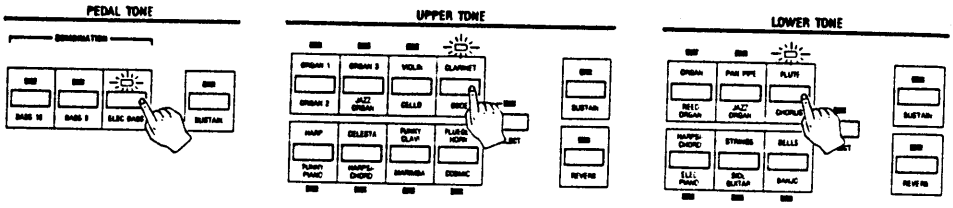
•In this basic mode, the CST-2000 operates like a conventional electronic organ, with separate timbres for the UPPER TONE, LOWER TONE and BASS parts. Note that volumes and effects can be set independently for each section of the keyboard.

PART 2: SELECTING SOUNDS

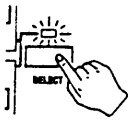
■ SELECTING UPPER TONE, LOWER TONE & PEDAL TONE TIMBRES

Selection of timbres for the UPPER TONE and LOWER TONE keyboards and PEDAL TONE.

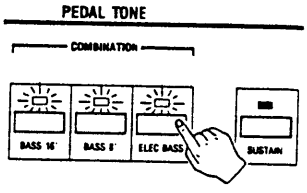
① Press the selector corresponding to the timbre of your choice in the UPPER TONE, LOWER TONE and PEDAL TONE section, respectively.



•Note that pressing the Bank Selector key so that the LED lights selects the timbre indicated by line.



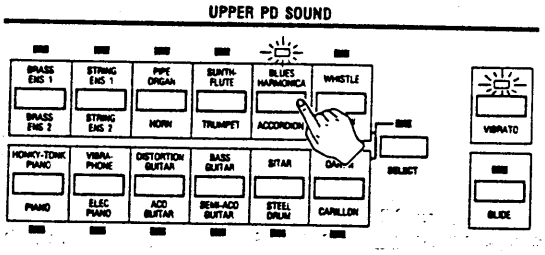
•Note that any or all of the PEDAL TONE timbres may be selected and sounded simultaneously.



■ SELECTING UPPER PD SOUNDS

The CST-2000 features a PD Sound Source which adds life-like synthesized sounds to either the UPPER TONE keyboard or LOWER TONE keyboard.

① Press the selector correponding to the timbre to be selected in the UPPER PD SOUND section.

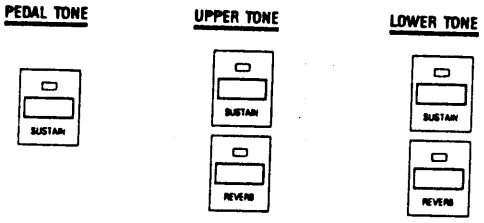


•Note that pressing the Bank Selector key so that the LED lights selects the timbre indicated by line.

■ EFFECTS

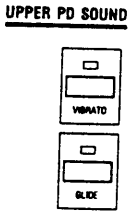
Effects selectors are located at different positions throughout the keyboard. These are used to select various effects including SUSTAIN, REVERB, VIBRATO, GLIDE, CHORUS, and TREMOLO. These effects are already preset in some timbres, and the depth (and speed in some cases) is preset according to the type of timbre selected.

SUSTAIN/REVERB



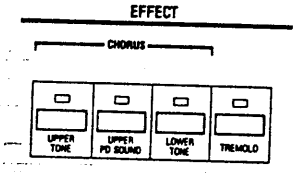
- SUSTAIN available for all timbres except UPPER PD SOUNDs.
- SUSTAIN is preset in some timbres. When REVERB is selected in these timbres, SUSTAIN effect suspended automatically.
- REVERB available in UPPER TONE and LOWER TONE timbres.
- REVERB is preset to OFF in all timbres. When selected, SUSTAIN effect disengages automatically.

VIBRATO/GLIDE



- Available in UPPER PD SOUND section only.
- VIBRATO is preset in some timbres.
- VIBRATO depth and speed preset for each timbre.
- GLIDE speed preset for each timbre. Normally OFF.
- Both may be selected at the same time, however GLIDE automatically disengages when a new timbre is selected.

CHORUS/TREMOLO



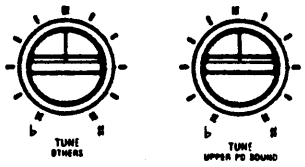
- Available in all timbres except PEDAL section.
- A rotating speaker effect may be gained by using TREMOLO in combination with CHORUS.
- TREMOLO speed varies according to the order in which effects are engaged.

CHORUS ON → TREMOLO ON ..... TREMOLO speed gradually increases, becoming fixed at a certain point

TREMOLO ON → CHORUS ON ..... TREMOLO speed fixed, both effects engaged

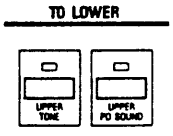
- TREMOLO only effective when CHORUS is ON.

■ TUNING



The CST-2000 features two TUNING controls, one corresponding to UPPER PD SOUND timbres, and the other controlling the tuning for the rest of the timbres. Both are set at A = 442Hz at the center position. These can be used to create a unique "detuned" effect when set slightly off from each other.

■ TO LOWER SECTION



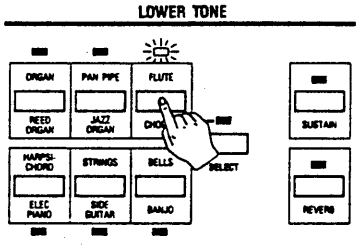
By pressing the UPPER TONE Assign key or UPPER PD SOUND Assign key, UPPER TONE or UPPER PD SOUND timbres may be assigned to the LOWER TONE keyboard. A specified key may be cancelled by pressing it once again so that the LED goes out.

■ TONE MIXING

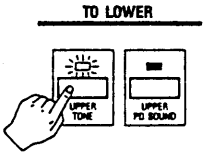
Use this function to create unique ensemble sounds on the UPPER TONE and LOWER TONE keyboards.

•Mixing UPPER TONE and LOWER TONE sounds on the LOWER TONE keyboard.

① Select any of the LOWER TONE timbres and effects.

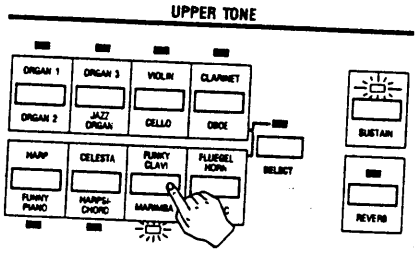


② Press the UPPER TONE Assign key in the TO LOWER section so that the corresponding LED lights.

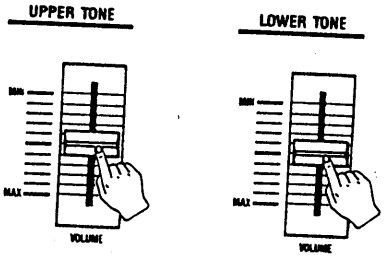


NOTE: Press UPPER TONE Assign key again to cancel.

③ Select any of the UPPER TONE timbres and effects.

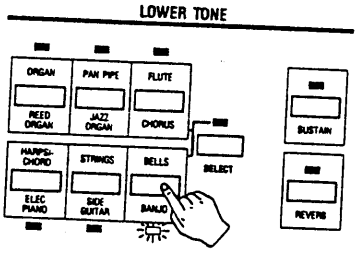


④ Mix sounds as desired via the UPPER TONE and LOWER TONE volume sliders.

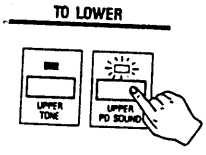


•Mixing UPPER PD SOUNDs and LOWER TONE sounds on the LOWER TONE keyboard.

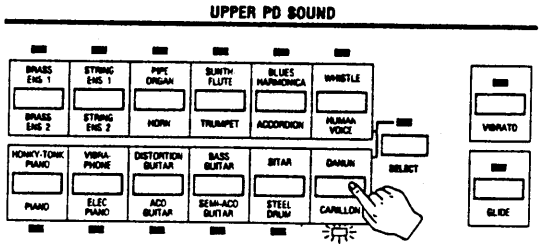
① Select any of the LOWER TONE timbres and effects.



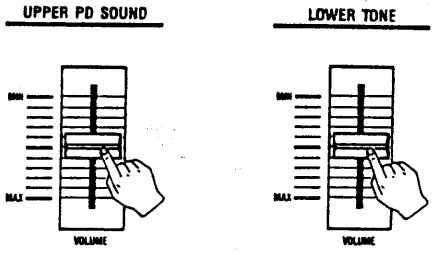
② Press the UPPER PD SOUND Assign key in the TO LOWER section so that the corresponding LED lights.



③ Select any of the UPPER PD SOUNDs and effects.

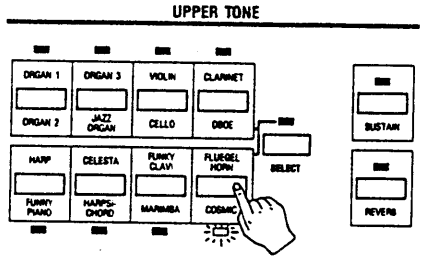


④ Mix sounds as desired via the UPPER PD SOUND and LOWER TONE volume sliders.

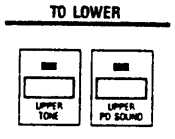


•Mixing UPPER TONE sounds and UPPER PD SOUNDs on the UPPER TONE keyboard.

① Select any of the UPPER TONE timbres and effects.

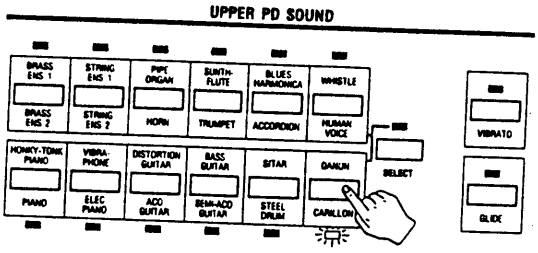


② Make sure that neither of the TO LOWER indicators are lit, as this function routes upper sounds to the LOWER TONE keyboard.

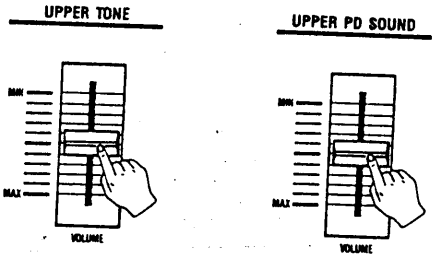


NOTE: Press TO LOWER key again to cancel.

③ Select any of the UPPER PD SOUNDs and effects.



④ Mix sounds as desired via the UPPER TONE and UPPER PD SOUND volume sliders.



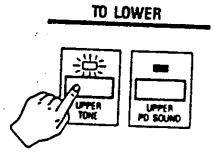
■ CANCELLING SELECTED TIMBRES

Any TONE selector which has been specified may be cancelled by pressing it once again so that the corresponding LED goes out.

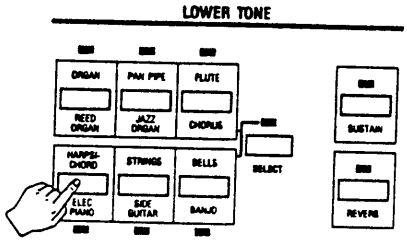
•Use of Tone Cancel

EXAMPLE: Playing UPPER PD SOUND timbre on UPPER TONE keyboard and UPPER TONE timbre on LOWER TONE keyboard.

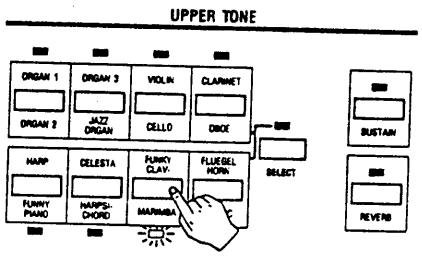
① Press the UPPER TONE Assign key in the TO LOWER section, moving the UPPER TONE to the LOWER TONE keyboard.



② Cancel any selected LOWER TONE timbre by pressing the corresponding selector (LED g
out). Only the UPPER TONE timbre will sound on the LOWER TONE keyboard.



③ Select any UPPER TONE timbre via UPPER TONE selectors.



NOTE: By cancelling PEDAL TONE and LOWER TONE timbres, it is possible to play without BA
and ACCOMPANIMENT.

■ EFFECTIVE USE OF TONE MIX

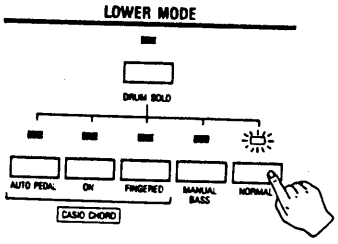
The Tone Mix function is particularly effective when two contrasting timbres are mixed, such as thos
shown below. Try experimenting with this function to make your own unique sounds.

TYPES OF TIMBRES	EXAMPLES
a: Decaying sounds & sustained sounds	SIDE GUITAR + STRING ENSEMBLE
b: Sounds with slow attack & sounds with fast attack	PIANO + BELLS
c: Sounds using different effects	PAN PIPE/REVERB + DISTORTION GUITAR/GLIDE

PART 3: LOWER MODE SECTION & AUTO-ACCOMPANIMENT

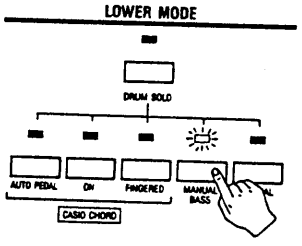
The CST-2000 features Casio's unique Casio Chord function, which adds bass, chords and obbligato parts to the built-in Rhythm Patterns. In addition to NORMAL organ play, you can choose from Auto Pedal, Casio Chord ON, FINGERED, and MANUAL BASS modes. The LOWER TONE keyboard is controlled by function keys in the LOWER MODE section.

•NORMAL



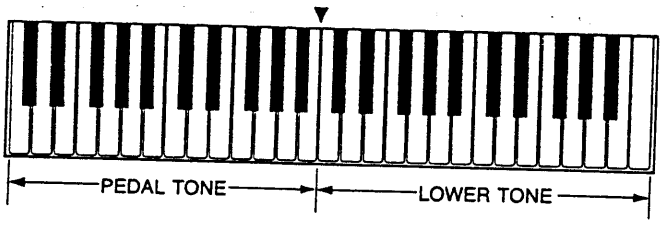
•Timbre(s) selected via LOWER TONE selectors (as well as timbres assigned via TO LOWER function) sound throughout the LOWER TONE keyboard.

•MANUAL BASS



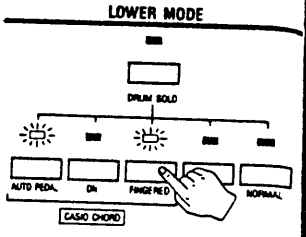
•Lower 2 octaves of LOWER TONE keyboard sound PEDAL timbre(s), volume controlled by PEDAL TONE volume slider.

•Upper 2 octaves of LOWER TONE keyboard operates as in NORMAL mode.



•AUTO-ACCOMPANIMENT (Casio Chord)

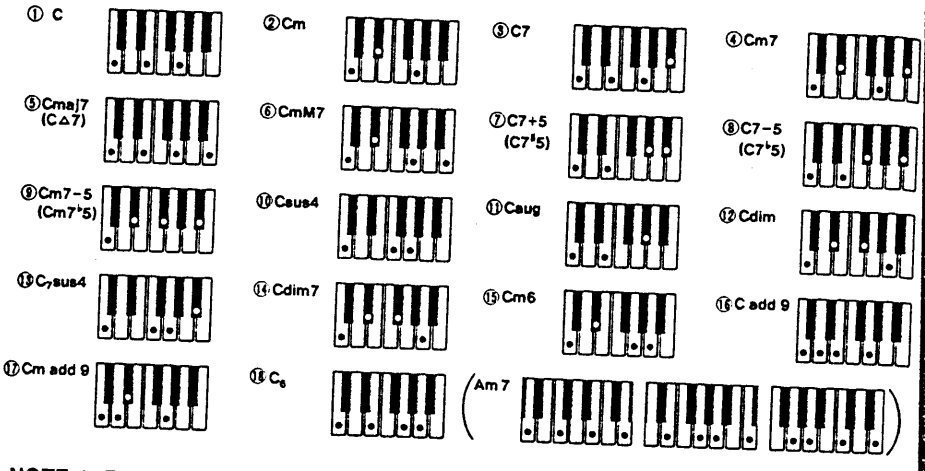
(1) FINGERED



•This auto-accompaniment mode allows you to finger chords freely throughout the LOWER TO keyboard (*lower two octaves only when Drum Solo is engaged).

ABOUT THE CHORDS CREATED WITH FINGERED ACCOMPANIMENT

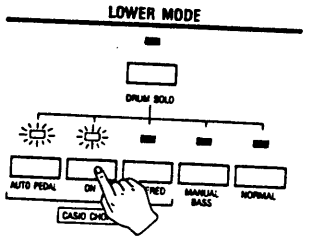
The CST-2000 is capable of recognizing the chords listed below.



NOTE 1: The root may change with some inverted chords. For example, in the case of 7—5, inverted forms with either C or E as the lowest note are considered C7—5 chords, while inverted forms with G♭ or B♭ as the lowest note are considered G♭7—5 chords.

NOTE 2: In the case of dim7, when only three notes are played at a time, the omitted note is judged to be a root note; when all four notes are played, the lowest note is judged to be the one.

(2) CASIO CHORD ON (One-Fingered Chords)



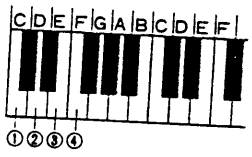
- Major chord is produced when any single key is played on the LOWER TONE keyboard (*lower two octaves only when Drum Solo is engaged).
- Chords formed as described in Casio Chord Guide.

CASIO CHORD GUIDE

When the Casio Chord functions is ON, major chords are produced which have the note pressed as a root. They are automatically played in time with the rhythm together with an appropriate bass line. If you want to change the Auto Accompaniment to minor, all you have to do is press any other key on the accompaniment keyboard to the right of the root key together with it. Pressing one more key (for a total of three) under these conditions produces seventh chords, while pressing a further one for a total of four produces minor seventh chords.

Examples:

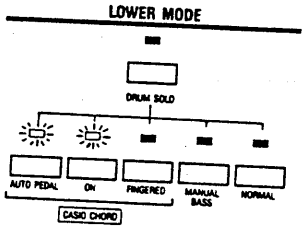
C (C major) ..... Press ①.
Cm (C minor) ..... Press ① and ② together*.
C_7 (C seventh) ..... Press ①, ② and ③ together*.
Cm_7 (C minor seventh)..... Press ①, ②, ③ and ④ together*.



*Not only ②, ③, but any keys to the right of ① on the accompaniment keyboard will produce the same effect, regardless of whether they are black or white keys.

*When the Casio Chord function is ON, the chords used for automatic accompaniment will be of the 4 types major (maj), minor (min), seventh (7th) or minor seventh (min 7th).

(3) AUTO PEDAL

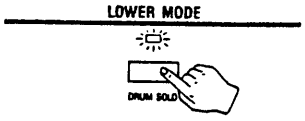


*Adds pedal bass timbre (bass pattern) automatically to Auto-Rhythm pattern.

PART 3: LOWER MODE SECTION & AUTO-ACCOMPANIMENT

*May be selected with FINGERED or CASIO CHORD ON functions.
*Chosen automatically when mode is changed from NORMAL or MANUAL BASS to either FINGERED or CASIO CHORD ON modes.
*Press AUTO PEDAL key to cancel.
*Pressing the BASS PEDALS while AUTO PEDAL is being used cancels the bass auto rhythm pattern. The bass auto pattern is resumed the next time the LOWER TONE keyboard is pressed while the BASS PEDALS are released.

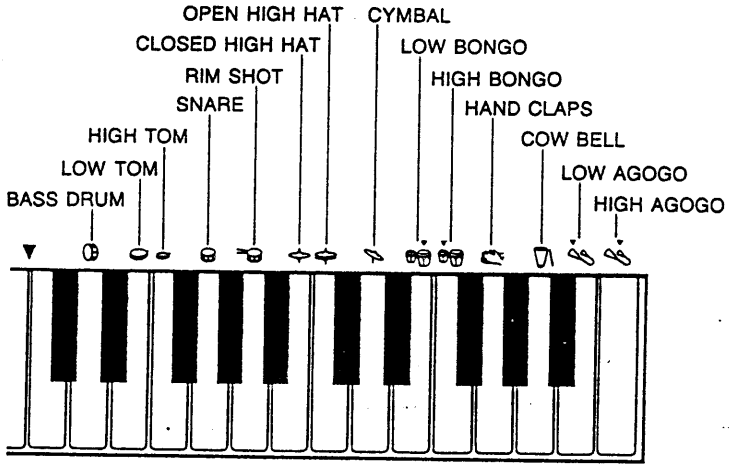
•DRUM SOLO



•Percussion timbres assigned to the white keys in upper 2 octaves of LOWER TONE keyboard may be played for Drum Solo or incidental percussion effect.

DRUM SOLO GUIDE

Percussion sounds correspond to white keys as shown below:



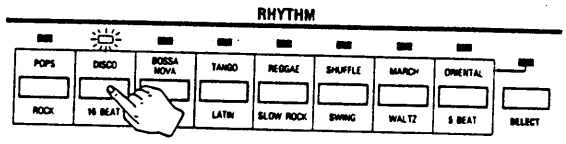
•Auto-Rhythm Pattern stops automatically when any of these keys are played. Press any of the keys in lower 2 octaves of LOWER TONE keyboard to start Auto-Rhythm pattern again.

PART 4: SELECTING RHYTHMS

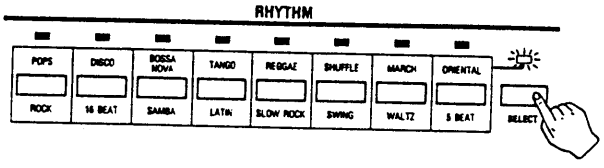
The CST-2000 offers a selection of 16 different Auto-Rhythms, each featuring corresponding Fill-in, Intro, and Ending patterns. These patterns can be altered through the use of Casio's unique SUPER DRUMS function, which gives you 4 variations for instruments and accompaniment patterns.

■ SELECTING AN AUTO-RHYTHM

① Press the selector corresponding to the Rhythm to be selected in the RHYTHM section. (LED lights)



•Note that pressing the Bank Selector key so that the LED lights selects the Rhythm listed above the selectors, while the Rhythms listed below the selector are specified when the LED is not lit.

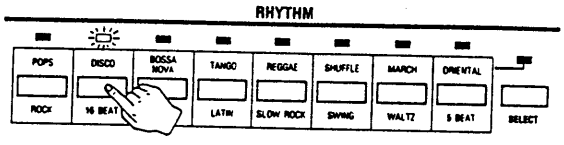


■ STARTING AN AUTO-RHYTHM

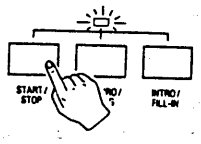
•START/STOP

Auto-Rhythms may be started and stopped independently by pressing the START/STOP key.

① Select an Auto-Rhythm via the RHYTHM selectors.



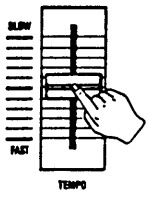
② Press the START/STOP key.



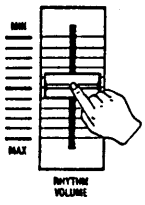
•The selected Auto-Rhythm pattern begins.

•The TEMPO INDICATOR flashes in red on the first beat of the measure, and in green on the remaining beats in each measure.

•Tempo may be adjusted via the TEMPO slider.



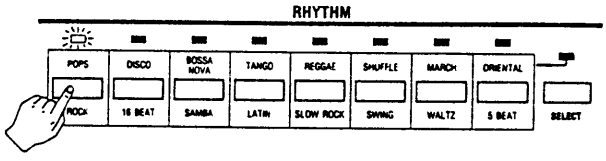
•Volume may be adjusted via the RHYTHM VOLUME slider.



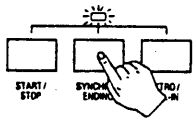
•SYNCHRO START

The SYNCHRO START function causes the Rhythm to start as soon as a key on the LOWER TONE keyboard is played.

① Select an Auto-Rhythm via the RHYTHM selectors.



② Press the SYNCHRO/ENDING key.



•The TEMPO INDICATOR flashes in green.

•Tempo may be adjusted via the TEMPO slider.

③ Play any key on the LOWER TONE keyboard (*lower two octaves when Drum Solo function is engaged).

•The selected Auto-Rhythm pattern begins.

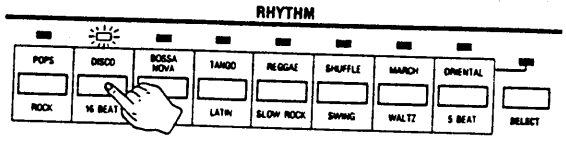
•Volume may be adjusted via the RHYTHM VOLUME slider.

•INTRO START

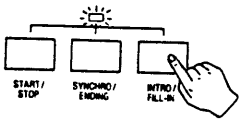
The INTRO START function causes the selected Rhythm to start after a two-measure introduction.

① Select an Auto-Rhythm via the RHYTHM selectors.

*The INTRO pattern differs in accordance with the SUPER DRUMS ACCOMPANIMENT (I ~ IV).



② Press the INTRO/FILL-IN key.



•A two-measure introduction corresponding to the the selected Rhythm type begins, leading in to the selected Rhythm.

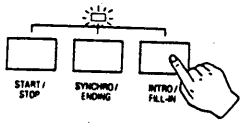
•The TEMPO INDICATOR flashes in red on the first beat of the measure, and in green on the remaining beats in each measure.

•Tempo may be adjusted via the TEMPO slider.

•Volume may be adjusted via the RHYTHM VOLUME slider.

■ FILL-IN PATTERNS

A Rhythm FILL-IN pattern may be inserted at any point in the selected Auto-Rhythm pattern by pressing the INTRO/FILL-IN key while the Rhythm pattern is playing.



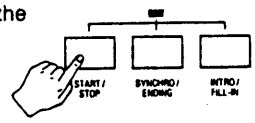
•If the FILL-IN key is held down, the Rhythm fill continues until the end of the measure during which it is released.

*The FILL-IN pattern differs in accordance with the SUPER DRUMS ACCOMPANIMENT (I ~ IV).

■ STOPPING AUTO-RHYTHMS

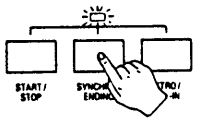
•START/STOP

Rhythm patterns may be stopped at any point by simply pressing the START/STOP key.



•ENDINGS

Press the SYNCHRO/ENDING key to stop the Rhythm pattern after an appropriate automatic ENDING pattern.



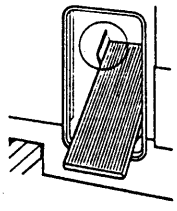
*The ENDING pattern differs in accordance with the SUPER DRUMS ACCOMPANIMENT (I ~ IV).

NOTE ABOUT AUTO-RHYTHMS

- Each timbre on LOWER TONE keyboard features a separate preset Auto-Rhythm pattern.
- A wide variety of accompaniment patterns are available through the selection of various rhythm and timbre combinations.
- If the Drum Solo mode is selected in the LOWER MODE section, Auto-Rhythm patterns stop automatically when any of the Drum Solo keys are played (upper half of LOWER TONE keyboard). To restart pattern, simply touch any key(s) on the lower half of the LOWER TONE keyboard.

■ AUTO-RHYTHM PAUSE SWITCH

A switch connected to the left edge of the foot volume pedal makes it possible to temporarily suspend Auto-Rhythm play for manual play of solos or fill-ins. Once this switch is pressed with the foot, Auto-Rhythm pattern pauses until the LOWER TONE keyboard is played again.

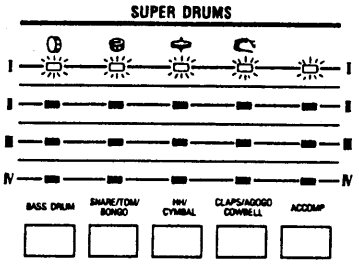


■ SUPER DRUMS

Casio's unique SUPER DRUMS function allows you to expand the CST-2000's 16 basic Rhythm patterns. This is accomplished by choosing from 4 variations of percussion instrument patterns and the accompaniment pattern (including INTRO, FILL-IN and ENDING patterns) for each of the 16 basic Rhythm channels.

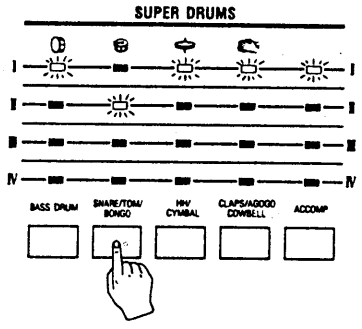
■ SUPER DRUMS SECTION

As shown below, the SUPER DRUMS control section contains 5 separate channels, corresponding to the BASS DRUM pattern, SNARE/TOM/BONGO pattern, HIGH HAT/CYMBAL pattern, HAND CLAP/AGOGO/COWBELL pattern, and ACCOMPANIMENT pattern, respectively.



■ ALTERING A PATTERN VIA SUPER DRUMS

To alter a selected Rhythm Pattern, simply press the selector corresponding to the type of instrument you want to alter - a SNARE DRUM for example.



- Each time the selector is pressed, the pattern or the instrument selected changes. An LED lights next to the number of the SUPER DRUMS pattern selected. Note that selector returns to pattern I after pattern IV, in a continuous cycle.

NOTE ABOUT FILL-IN/INTRO/ENDING PATTERNS

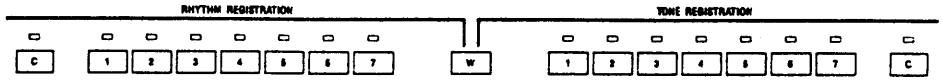
Fill-in, Intro and Ending patterns are altered automatically when changes are made in the SUPER DRUMS ACCOMPANIMENT channel. This effect can be useful in creating unique patterns for original arrangements.

EFFECTIVE USE OF SUPER DRUMS

- Casio's unique SUPER DRUMS function can be used in a number of ways, to add creative rhythms to your music. Try altering a pattern during a song for variation corresponding to chorus, bridge passages, etc.
- SUPER DRUMS settings may be entered into memory of each Auto-Rhythm pattern. When an Auto-Rhythm pattern is selected, the most recent SUPER DRUMS setting in the pattern is recalled.

PART 5: TONE & RHYTHM REGISTRATION

Once you've mastered the basic CST-2000 operations, you'll discover certain keyboard "setups" that you particulary like, or that you want to use regularly for performance. These programs are put into Registration Channels for instant recall. The CST-2000 features 8 Tone Registration channels, and 8 Rhythm Registration channels.



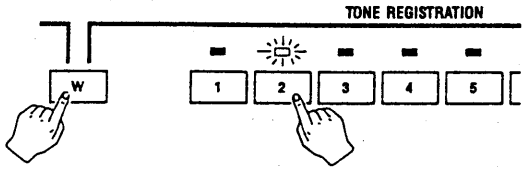
■ TONE REGISTRATION

The CST-2000 lets you store 8 separate Tone settings, including Tone selection, Tone Mix settings, and effects settings including Chorus and Tremolo. These settings are recalled instantaneously by specifying a Tone Registration channel.

■ REGISTERING TONES

① Set up the keyboard with the sounds and effects desired.

② Hold down the WRITE key and press any Tone Registration key.



•All Tone-related parameters are now entered into the channel corresponding to the key which was depressed.

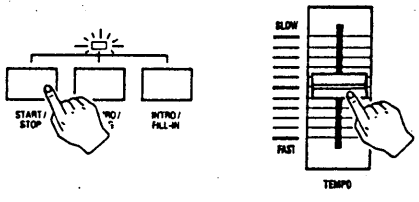
■ RHYTHM REGISTRATION

In addition to Tone programs, Rhythms can also be held in the Registration memory. Rhythm Registration programs contain basic rhythms, as well as SUPER DRUMS settings and Tempo settings, if desired.

■ REGISTERING RHYTHMS

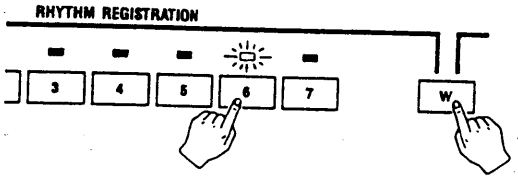
① Set up the keyboard with the desired basic rhythm, SUPER DRUMS settings.

② When registering Tempo, press the START/STOP key to start the Rhythm track and set the Tempo via the TEMPO slider.



*When not registering Tempo, make sure that the Rhythm is stopped.

③ Hold down the WRITE key and press any Rhythm Registration key.



•All Rhythm-related parameters are now entered into the Rhythm Registration channel corresponding to the key which was depressed.

NOTES:

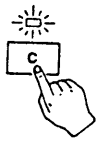
•When one of the Rhythm Registration channels is selected, the rhythm track begins at the tempo programmed at registration. The TEMPO slider may then be used to alter this tempo. In this case, the TEMPO slider position and the actual tempo of the rhythm being played are not correspondent.

•Pressing Rhythm Registration selectors while rhythm is stopped causes the TEMPO indicator to flash 3 times in yellow, indicating registered tempo in the selected channel.

■ CANCEL BANKS

Both the Tone and Rhythm Registration functions feature a CANCEL Bank, which stores the most recent Tone and Rhythm settings.

① Press the CANCEL key in Tone Registration or Rhythm Registration section.



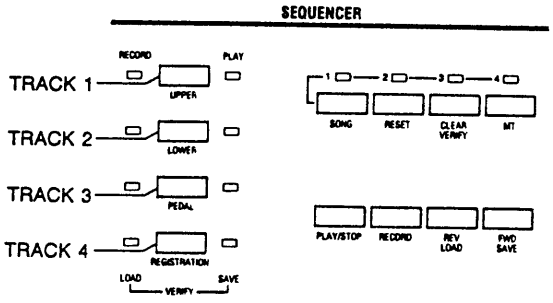
② Alter keyboard timbre or rhythm as desired.

*Settings are now registered in memory.

*CANCEL BANK settings may be recalled after selecting another Registration channel by pressing the CANCEL key once again.

PART 6: 4-TRACK SEQUENCER OPERATION

The CST-2000 is equipped with a "SEQUENCER," which can be used for real-time recording of up to 4 complete songs. This recorder features 4 independent "tracks," so UPPER, LOWER and PEDAL parts can be recorded and played back entirely independently. The 4th track holds REGISTRATION data, including Rhythm & Tone registration, LOWER MODE settings, and timing of changes in Rhythm including START, STOP, SYNCHRO, FILL-IN, INTRO and ENDING points for the entire song being recorded.



TRACK 1 — UPPER TONE keyboard Track

TRACK 2 — LOWER TONE keyboard Track

TRACK 3 — PEDAL Track

TRACK 4 — REGISTRATION Track

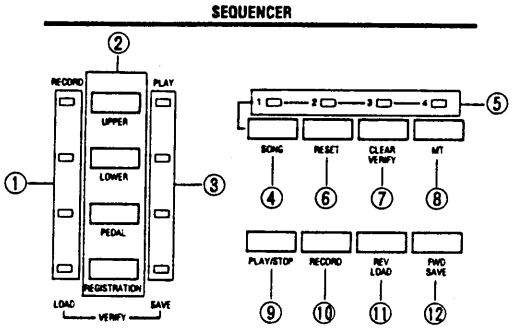
- •Tone Registration timing
- •Rhythm Registration timing
- •Lower Mode settings, timing
- •Timing of changes in Rhythm (START/STOP, SYNCHRO, FILL-IN, INTRO, ENDING)

■ REAL-TIME RECORDING

Real-time recording refers to recording sounds just as they are produced on the keyboard. This is quite similar to recording using a conventional multi-track tape recorder.

FEATURES & FUNCTIONS FOR CONTROL

All controls necessary for Sequence Recording are located in the SEQUENCER section.



① RECORD Indicators
Indicate the track being recorded

② TRACK selectors
Used to select tracks for recording or playback

③ PLAY Indicators
Indicate the track being played back

④ SONG selector
Used to select SONG number (1 through 4)

⑤ SONG Indicators
Indicate the SONG selected

⑥ RESET key
Used to return selected SONG to beginning

⑦ CLEAR key
Used to clear entire SONGs or individual TRACKs from memory

⑧ MT key
Used in Program Save operation (See PART 7: PROGRAM SAVE)

⑨ PLAY/STOP
Used to start or stop TRACK or SONG playback

⑩ RECORD key
Used to specify record function

⑪ REVERSE key
Used to rewind TRACKs or SONGs

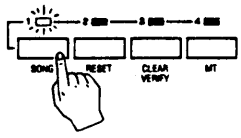
⑫ FORWARD key
Used to fast-forward TRACKs or SONGs

■ RECORDING SONGS

SONGs can be recorded either by playing all of the tracks simultaneously, or one TRACK at a time. TRACKs may be recorded in any order when recorded independently.

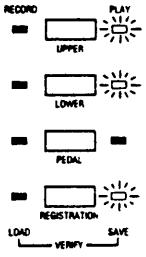
(1) SELECT SONG NUMBER

Press the SONG selector to select the SONG number to be recorded.



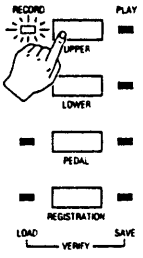
*An LED indicates SONG which has been selected. The SONG number changes each time the SONG selector is pressed (1-2-3-4-1...).

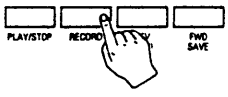
*TRACKs within the selected SONG which already contain data are indicated by PLAY indicators (green).



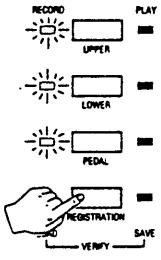
(2) SELECT A TRACK

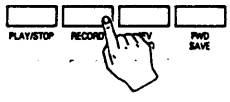
Hold down the RECORD key and press the TRACK selector corresponding to the TRACK(s) to be recorded. Multiple TRACKs can be selected for simultaneous recording.



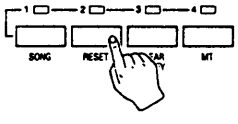


*A RECORD indicator (red) flashes next to the TRACK(s) selected for recording. (The corresponding PLAY indicator (green) is also lit if the selected TRACK already contains data.)



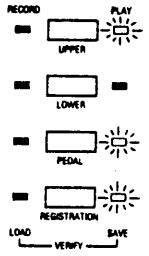


*The RECORD mode can be cancelled at any time by pressing the RESET key.

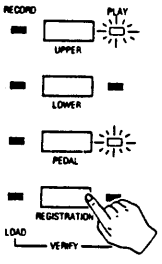


SELECT TRACK(S) FOR PLAYBACK DURING RECORDING

TRACKs which already contain data (green LED lights) may be selected for playback during recording of additional tracks.

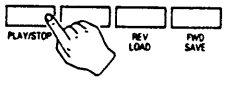


*TRACK(s) to be played back during recording are switched ON/OFF using the corresponding selectors.



(3) START RECORDING

Press the PLAY/STOP key.



*Rhythm begins after a 2-bar intro count.

*When selected as a playback track, REGISTRATION Track play also begins after the 2-bar intro.

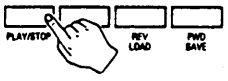
ENTER DATA TO BE RECORDED (PUNCH IN)

Recording begins when data is entered into the track. In the case of tracks 1, 2 and 3, this means that playing the UPPER TONE keys, LOWER TONE keys and PEDAL, respectively, starts the actual recording process. This is known as the "PUNCH IN" point. In the REGISTRATION Track, the PUNCH IN point corresponds to the selection/altering of REGISTRATION data.

*All data present in the Track being recorded is erased from the PUNCH IN point onward. This allows editing and re-recording starting from certain points in the track.

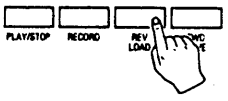
(4) RECORDING STOP/PAUSE

Press STOP key to stop recording at any point. Rhythm stops, and recording enters the pause mode.

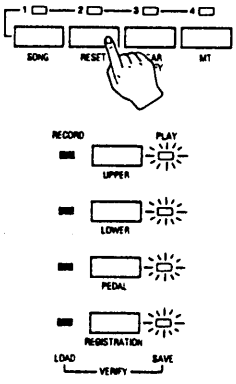


— RECORD indicator flashes
— PLAY indicator(s) light

TRACK(s) can be rewinded from this point by pressing REVERSE key.



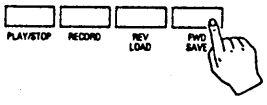
*SONG may be returned to beginning by pressing RESET key. (Exits from RECORD mode.) At this time, PLAY indicator lights next to recorded TRACK(s).



■ REVERSE/FORWARD FUNCTIONS

FORWARD

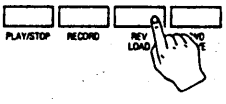
•Press the FWD key once to move the selected TRACK or SONG ahead slightly faster than playback tempo.



*Hold down the FWD key to move TRACK or SONG ahead at high speed.

REVERSE

•Press the REV key once to move the selected TRACK or SONG back at the same tempo as playback.



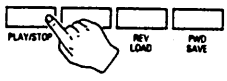
*Hold down the REV key to move the selected TRACK or SONG back at high speed.

*Rim Shots sound to count out individual beats.

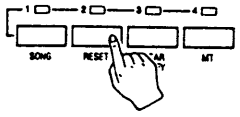
*Reverse play of Casio Chord & Fingered chords is represented by the notes actually fingered on the keyboard, not by the corresponding chords produced.

STOP REVERSE/FORWARD

•Press STOP key to stop at any point.



•Press RESET key to stop and return to beginning of SONG.



NOTES ABOUT REVERSE/FORWARD

•Selectors and keys other than STOP, RESET, FWD, and REV are non-operational during REVERSE or FORWARD operation.

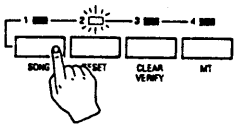
•REV/FWD functions operate only when playback is stopped.

■ PLAYING BACK SONGS & PATTERNS

SONGs may be played back in their entirety (all recorded TRACKs), or in any combination of TRACKs.

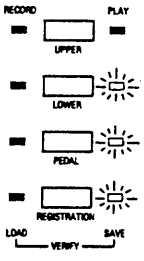
(1) SELECT SONG NUMBER

Press SONG selector to specify SONG number to be played back.



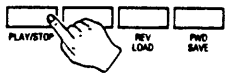
(2) SELECT DESIRED TRACKS

Initially, all recorded TRACKs in the SONG are selected. Press the corresponding TRACK selector(s) to turn OFF unnecessary TRACK(s).



(3) PRESS PLAY KEY

Press the PLAY key to begin playback.

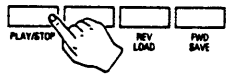


*Rhythm, programmed in REGISTRATION Track begins, without 2-bar intro count.

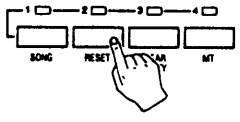
*If no Rhythm is programmed in the REGISTRATION Track, the currently selected Rhythm begins.

(4) PLAYBACK STOP/RESET

Press STOP to stop playback at any position.



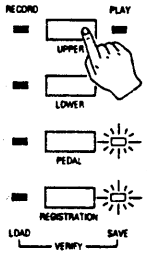
Press RESET to return the SONG to the beginning.



*When the end of the longest TRACK in any SONG is reached, playback is automatically suspended. The end position is held until changed using the RESET key or REV key.

■ TURNING TRACKS ON & OFF DURING PLAYBACK

Any of the TRACKs in the selected SONG may be turned ON or OFF at any time during playback.

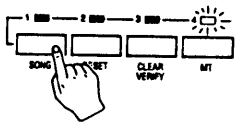


*Playback is suspended if all TRACKs are turned OFF.

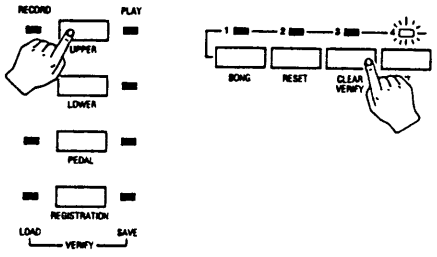
■ CLEARING TRACKS FROM MEMORY

TRACKs may be cleared from memory, using the CLEAR key.

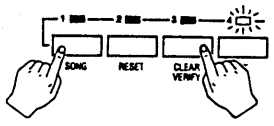
① Select the SONG number which contains TRACK to be cleared.



② Hold down CLEAR key and press the TRACK selector corresponding to the TRACK to be cleared.



③ To clear an entire SONG, select the corresponding SONG number with the SONG selector, hold down the CLEAR key and press the SONG selector once again.



■ MANUAL KEYBOARD PLAY DURING SEQUENCER PLAYBACK

By selecting specific TRACKs, Sequencer SONGs can be used as "minus-one" accompaniment for practice play. During sequencer playback, the keyboard may be played manually, within the 8-note polyphonic range. When more than 8 notes are played simultaneously (including notes from sequencer tracks), the sequencer programs take precedence, and manually-produced notes do not sound.

■ SONG SEQUENCE MEMORY

In most cases, each SONG features only 4 tracks, however longer songs may be created by making use of memory space from a succeeding song. The capacity of these memory areas are shown below:

■ SEQUENCER MEMORY CAPACITY

Single TRACKs feature the following memory capacities:

UPPER = 441 notes/song

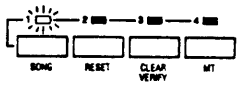
LOWER = 441 notes/song

PEDAL = 146 notes/song

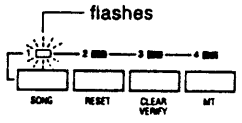
REGISTRATION = 20 Operations (TONE/RHYTHM/LOWER MODE/RHYTHM STATUS)

When the memory area of a TRACK being recorded becomes full, recording automatically transfers to the corresponding TRACK in the next SONG. The SONG indicators show the state of recording, as shown below:

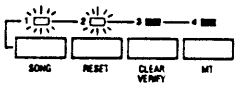
A — TRACK in SONG 1 being recorded



B — TRACK memory nearly full (appr. 16 beats remain)



C — Recording transferred to TRACK in SONG 2



■ REGISTRATION TRACK

The REGISTRATION Track features 4 sub-tracks, which operate independently. Each selection or change specified in any of these sub-tracks is known as an OPERATION. A REGISTRATION Track may contain up to 20 OPERATIONS.

REGISTRATION TRACK
- TONE REGISTRATION
- RHYTHM REGISTRATION
- LOWER MODE
- RHYTHM STATUS (START/STOP, FILL-IN, INTRO, ENDING)

*Because these sub-tracks are independent of each other, changing one setting during recording does not effect the settings of other sub-tracks.

•TO CHANGE SUB-TRACK DATA AFTER REGISTRATION TRACK INPUT

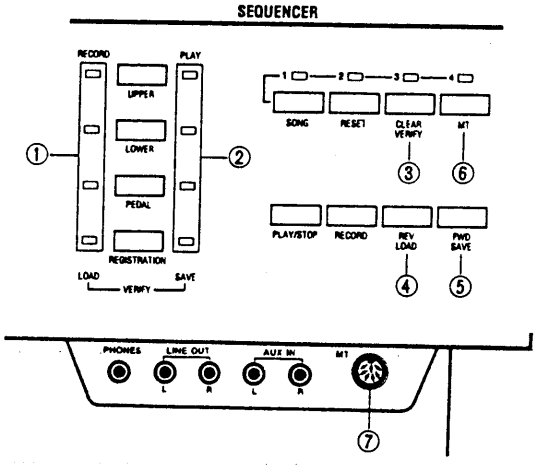
First start REGISTRATION record. While the 2-bar intro count is sounding, press the key of the data to be changed. Doing so applies the changes to all of the specified sub-track data.

PART 7: SAVING PROGRAMS

All contents of the Sequencer, as well as Tone Registration and Rhythm Registration programs may be saved on cassette tape. This can be accomplished using a DATA RECORDER, or a normal cassette tape recorder.
It is also possible to SAVE/LOAD only REGISTRATION programs when there are no contents in the Sequencer memory, but it is impossible to SAVE/LOAD Sequencer programs without Registration data.

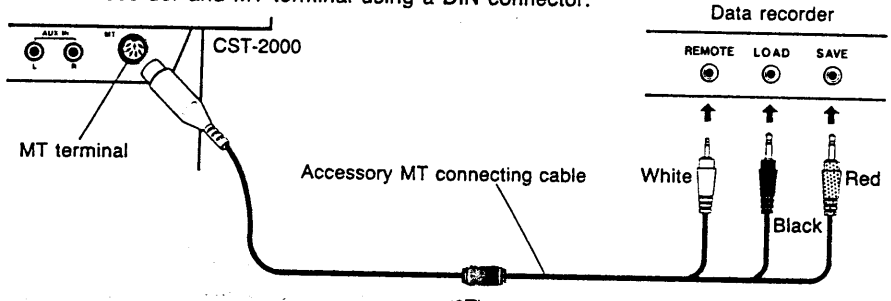
FEATURES & FUNCTIONS FOR CONTROL

① LOAD indicators
② SAVE indicators
③ VERIFY key
④ LOAD key
⑤ SAVE key
⑥ MT key
⑦ MT terminal



■ SAVE

① Connect recorder and MT terminal using a DIN connector.

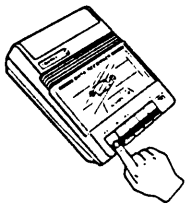


*The recorder end of the cord is divided among white (REMOTE), black (LOAD), and red (SAVE).

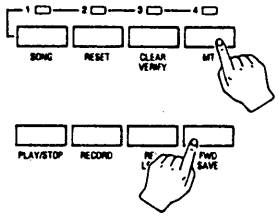
<Connecting to the DATA RECORDER>

White ..... Remote (REM) terminal.
*Not used for recorders without remote terminals.
Black ..... Earphone (EAR) terminal or load (LOAD) terminal.
Red ..... Microphone (MIC) terminal or save (SAVE) terminal.
*Connections can differ for certain recorders. See the operation manual of the specific recorder for details on correct connections.

② Set the recorder for recording.



③ Hold down the MT key and press the SAVE key.



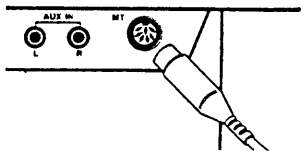
*SAVE indicators and LOAD indicators light during the SAVE operation.

*Operation returns to the RESET mode when SAVE is completed.

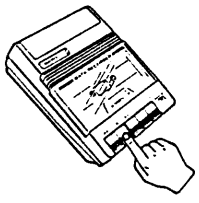
*All SAVE indicators flash if an ERROR occurs. Press RESET key to return to the RESET mode.

■ LOAD

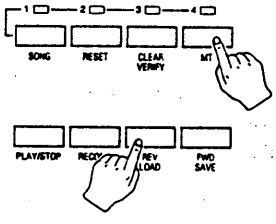
① Connect recorder and MT terminal using a DIN connector.



② Set the recorder for play.



③ Hold down the MT key and press the LOAD key.

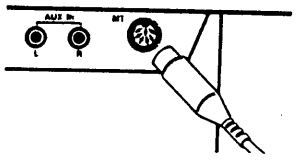


*Operation returns to RESET mode when LOAD is completed.

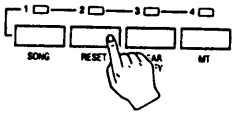
*All LOAD indicators flash if an ERROR occurs. Press RESET key to return to the RESET mode.

■ VERIFY PROCEDURES

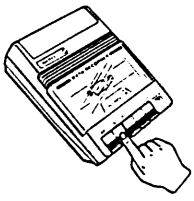
① Connect recorder and MT terminal using a DIN connector.



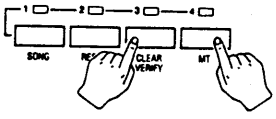
② RESET the sequencer to beginning of program.



③ Set cassette tape at point to be verified, and set recorder for play.



④ Hold down the MT key and press the VERIFY key.



*SAVE and LOAD indicators light during VERIFY procedure.

*Operation returns to RESET mode at completion of VERIFY procedure.

*All SAVE and LOAD indicators flash simultaneously if an ERROR occurs. Press the RESET key to return to the RESET mode.

NOTES ON MT SAVE/LOAD OPERATIONS

*SAVE/LOAD can only be performed with the rhythm and sequencer stopped.

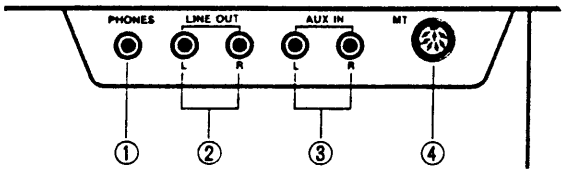
*During SAVE/LOAD operations, controls other than the RESET key do not function.

*To exit from SAVE/LOAD operations, press the RESET key. An ERROR is indicated. Press the RESET key once again to return to the RESET mode.

*ALL SAVE operations take about 2 and a half minutes, while REGISTRATION-only operations take about 0.5 seconds to complete.

PART 8: EXTERNAL CONNECTIONS

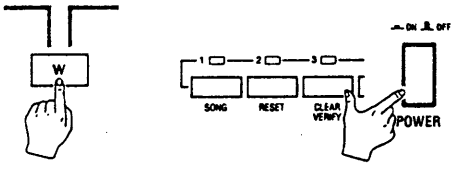
In addition to the MT terminal, the CST-2000 features Auxiliary In, Line Out and Phones jacks, for connection of external sound sources, output of CST-2000 sounds, and headphone connection, respectively.



① PHONES jack ..... stereo phone jack
② LINE OUT jacks ..... phone jacks × 2
L & R channels independent
③ AUX IN jacks ..... phone jacks × 2
L & R channels independent, volume controlled via EXPRESSION PEDAL and MAIN VOLUME slider
④ MT terminal ..... 8-pin DIN connector

PART 9: INITIALIZATION

To initialize all data in the CST-2000 (reset program data to factory settings) switch power ON while holding down the WRITE key in the REGISTRATION section and the SEQUENCER CLEAR key.



*Sequencer data cleared, Registration channels cleared.

*Sequencer returns to RESET mode.

*Tones and Rhythm return to upper left hand selectors (No.1 & 2 PEDAL timbres selected).

TROUBLESHOOTING

Trouble	Possible Cause	Action
No sound even if keys are pressed.	1. Volume slider on EXPRESSION PEDAL turned down. 2. Headphones connected.	1. Adjust VOLUME slider and EXPRESSION PEDAL. 2. Disconnect headphones.
No rhythm.	RHYTHM VOLUME turned down.	Adjust RHYTHM VOLUME.
No accompaniment.	CASIO CHORD ON and FINGERED both OFF.	Press either CASIO CHORD ON or FINGERED button.
Occasional interference.	Refrigerator, washing machine or similar electric appliance.	Use power outlet as far away as possible from appliance thought to be causing interference.
No sound when connected to external amplifier.	1. Volume slider on EXPRESSION PEDAL turned down. 2. Defective connecting cord.	1. Adjust VOLUME slider and EXPRESSION PEDAL. 2. Replace connecting cord.

CARE OF YOUR UNIT

1. Avoid heat, humidity, and direct sunlight.

Do not overexpose the unit to direct sunlight, place it near a heater, or in any area subject to high temperature.

2. Severe impacts can result in malfunction.

When carrying or transporting the unit, protect the keyboard and buttons by packing with a soft cloth.

3. Keep the unit free of liquids, dust, particles, etc.

Do not allow foreign matter to enter between the keys. Be especially careful of metallic objects such as hairpins, sewing needles or coins. Also, do not allow the unit to get wet.

4. Never attempt to modify any part of the unit.

Your keyboard is a precision musical instrument made up of sophisticated electronic parts. Any modification of, or tampering with internal components can cause trouble or malfunction.

5. Do not use lacquer thinner or similar chemicals for cleaning.

Clean the keyboard with a soft cloth dampened with a mild detergent. Soak the cloth in the detergent solution and squeeze it until almost dry.

6. In case of malfunction . . . .

Check whether buttons and connections are set correctly as indicated in the troubleshooting chart on page 38 of this manual. If the unit still does not work properly, contact the original retailer or a nearby dealer. Never attempt to repair the unit yourself. This can result in serious damage of the components.

SPECIFICATIONS

KEYBOARDS:	Upper: 49 keys (C3 ~ C7), Lower: 49 keys (C2 ~ C6), Pedal: 13 keys (C2 ~ C3)
UPPER TONE:	16; Organ 1, Organ 3, Violin, Clarinet, Funny piano, Harpsichord, Marimba, Cosmic, Organ 2, Jazz organ, Cello, Oboe, Harp, Celesta, Funky clavi, Fluegel horn
UPPER PD SOUND:	24; Brass ens 1, String ens 1, Pipe organ, Synth-flute, Blues harmonica, Whistle, Piano, Elec piano, Aco guitar, Semi-aco guitar, Steel drum, Carillon, Brass ens 2, String ens 2, Horn, Trumpet, Accordion, Human voice, Honky-tonk piano, Vibraphone, Distortion guitar, Bass guitar, Sitar, Qanun
LOWER TONE:	12; Organ, Pan pipe, Flute, Elec piano, Side guitar, Banjo, Reed organ, Jazz organ, Chorus, Harpsichord, Strings, Bells
PEDAL TONE:	3; Bass 16', Bass 8', Elec bass (Tone mix: Bass 16' + Bass 8', Bass 16' + Elec bass, Bass 8' + Elec bass, Bass 16' + Bass 8' + Elec bass)
AUTO RHYTHM:	16; Rock, 16 beat, Samba, Latin, Slow rock, Swing, Waltz, 5 beat, Pops, Disco, Bossa nova, Tango, Reggae, Shuffle, March, Oriental
SUPER DRUMS:	Bass drum, Snare/Rim shot/Tom Tom/Bongo, High hat/Cymbal, Hand claps/ Agogo/Cow bell, Accompaniment
EFFECT:	Sustain (Upper tone, Lower tone, Pedal tone), Reverb (Upper tone, Lower tone), Chorus (Upper tone, Upper PD sound, Lower tone), Vibrato (Upper PD sound), Glide (Upper PD sound), Tremolo (Upper tone, Upper PD sound, Lower tone)
TUNING CONTROL:	2 (Upper PD sound, Others), ±50 cent (±1/4 tone)
TO LOWER MODE:	Upper tone, Upper PD sound
LOWER MODE:	Drum solo, Normal, Manual bass, Fingered, Casio chord, Auto pedal
REGISTRATION:	Tone registration: 8 memory banks Rhythm registration: 8 memory banks
SEQUENCER:	4 tracks (Upper/Lower/Pedal/Registration), Method: Real-time, 4 songs, Memory capacity: Approx. 4,500 notes
TERMINALS:	Line out (Output impedance = 3.6 KΩ, Output voltage = 2.3V (RMS) max, L/R), Aux in (Input impedance = 8.2KΩ, Sensitivity = 670mV L/R), Phones × 1, MT (Cassette tape Save/Load)
OTHERS:	Expression pedal, Auto-rhythm pause switch, Tone mix
BUILT-IN SPEAKER:	25cm ($9^4/_5$") dia. × 2, tweeter 6.5cm ($2^1/_2$") dia. × 2, Output = 30W + 30W
POWER SOURCE:	AC (100/120/220/240V)
POWER CONSUMPTION:	215W
DIMENSIONS:	103.7(W) × 50.2(D) × 89.7(H) cm ($40^4/_5$"W × $19^3/_4$"D × $35^5/_{16}$"H)
WEIGHT:	43 Kg (94.8 lbs)
STANDARD ACCESSORIES:	AC cord, Music stand, Dust cover, Chair, MT cable

**Design and specifications are subject to change without notice.*

WARNING:
CHANGING THE VOLTAGE SELECTOR MAY REQUIRE THE USE OF A DIFFERENT LINE CORD OR ATTACHMENT PLUG, OR BOTH. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the computer with respect to the receiver
..... move the computer away from the receiver
..... plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.